

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
11 November 2004 (11.11.2004)

PCT

(10) International Publication Number
WO 2004/097344 A2

(51) International Patent Classification⁷: **G01F**

(21) International Application Number:

PCT/GB2004/001751

(22) International Filing Date: 23 April 2004 (23.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0309385.3 25 April 2003 (25.04.2003) GB

(71) Applicant (*for all designated States except US*): CXR LIMITED [GB/GB]; Unit 5, Riverside Business Centre, Walnut Tree Close, Guildford GU1 4UG (GB).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): MORTON, Edward, James [GB/GB]; 37 Banders Rise, Guildford, Surrey GU1 2SL (GB).

(74) Agent: BARKER BRETELL; 138 Hagley Road, Edgbaston, Birmingham B16 9PW (GB).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

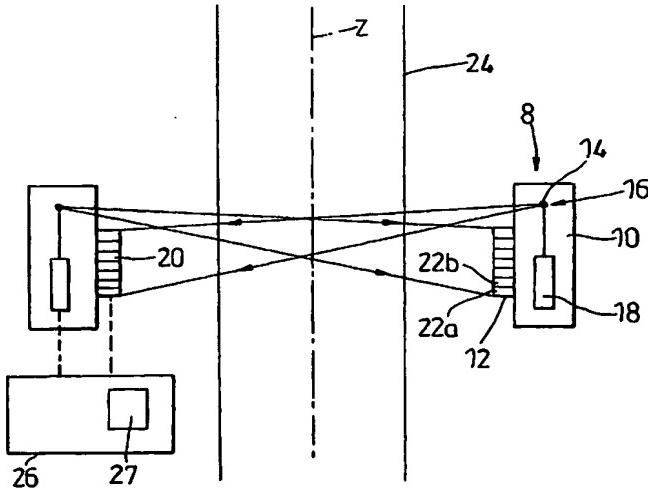
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: X-RAY MONITORING



WO 2004/097344 A2

(57) Abstract: Apparatus for monitoring in real time the movement of a plurality of substances in a mixture, such as oil water and air flowing through a pipe (24), comprises an X-ray scanner (8) arranged to make a plurality of scans of the mixture over a monitoring period to produce a plurality of scan data sets, and control means (26) arranged to analyse the data sets to identify volumes of each of the substances and to measure their movement. By identifying volumes of each of the substances in each of a number of layers and for each of a number of scans, real time analysis and imaging of the substance can be achieved.